

Dividing Powers

(With the Same Base)

9/16

Rule #2 Keep the Base and Subtract the exponents

Example) $\frac{3^5}{3^3} = 3^{5-3} = 3^2$

Sep 12-9:13 AM

Examples ~~5555.5.5.5~~
~~5.5.5.5~~

① $\frac{5^7}{5^4} = 5^3$

② $\frac{m^8}{m^3} = m^5$

③ $\frac{6^8}{2^8} = \frac{6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6 \cdot 6}{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2}$

④ $\frac{m^5 \cdot n^4}{m^2 \cdot n^1} = m^3 n^3$

*if the bases are different
You cannot simplify

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on own

$$\textcircled{1} \frac{x^{10}}{x^4} = x^6$$

$$\textcircled{2} \frac{3^4 \cdot 5^2 \cdot 7^5}{3^2 \cdot 5 \cdot 7^3}$$
$$3^2 \cdot 5 \cdot 7^2$$

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What if...

$$\textcircled{1} \frac{12w^5}{2w^1}$$

$$6w^4$$

Steps

- ① Divide Coefficients
- ② Keep Base
- ③ Subtract Exponents

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$$\textcircled{2} \frac{15x^5y^3z^2}{3xyz} = 5x^4y^2z$$

$$\textcircled{3} \frac{6a^2b}{1a} = 6ab$$

$$\textcircled{4} \frac{1a^3b}{5a} = \frac{a^2b}{5}$$

$$\textcircled{5} \frac{x^5}{x^{-2}} = x^{5+2} = x^7$$

$$\textcircled{4} \frac{x^5}{x^7} = x^{5-7} = x^{-2}$$

NO DECIMALS

Sep 11-8:52 AM

on own

$$\textcircled{1} \frac{36a^3b^4c^2}{4ab^2c} = 9a^2b^2c$$

$$\textcircled{2} \frac{3a^2b}{2a} = \frac{3ab}{2}$$

NO decimals

1.5ab

1 1/2 ab

No mixed #'s

Variables go with the numerator

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